## Claims

1. A method for reducing the noise of turbo engines with cascades (S1, R1; S2, R1; S3, R3; S4, R4), **characterized in that** hydrodynamic pressure fluctuations occurring on the cascades (S1, R2; S2, R1; S3, R3; S4, R4) are reduced by varying the surface circulation of at least a section of at least one stator (S1, S2, S3, S4).

2. A method according to claim 1, **characterized in that** the surface circulation of one or more blades (S) of the stator (S1, S2, S3, S4) is varied.

3. A method according to claim 2, **characterized in that** the aerodynamic characteristics of the stator (S1, S2, S3, S4) are varied through the deflection of one or more blades (S) or sections thereof.

4. A method according to claim 2 or 3, **characterized in that** the aerodynamic characteristics of the stator (S1, S2, S3, S4) are varied by air flowing into one or more blades (S) or flowing out of one or more blades (S).

5. A method according to any one of the claims 2 – 4, **characterized in that** that several blades (S) of a stator (S1, S2, S3, S4) are controlled individually or corresponding to the separation and rotational speed of the stator (S1, S2, S3, S4) with a delay.

6. A method according to claim 5, **characterized in that** the phase position and/or the amplitude of the control is regulated by means of error signals.

7. A method according to any one of the above claims, **characterized in that** the surface circulation of the stator (S1, S2, S3, S4) is varied periodically.

8. A method according to claim 7, **characterized in that** the control frequency of the periodic method corresponds to the base frequency of the tonal noise resulting from the product of the rotor blade number and the rotational speed.

9. A method according to any one of the claims 1 – 4, **characterized in that** air is blown out continuously on the trailing edge of one or more blades (S) of the stator (S1, S2, S3, S4) so as to harmonize the circulation of downstream cascades.

10. A rotor-stator arrangement, **characterized in that** means (11, 12, 13, 14, 15, 16, 17) for influencing the surface circulation of at least one section of the stator (S1, S2, S3, S4) are provided on one or more stators (S1, S2, S3, S4).

11. A rotor-stator arrangement according to claim 10, **characterized in that** the means (11, 12, 13, 14, 15, 16, 17) are one or more leading edge flaps (12) disposed on one or more blades of the stator (S1, S2, S3, S4).

12. A rotor-stator arrangement according to claim 10, **characterized in that** the means (11, 12, 13, 14, 15, 16, 17) are one or more trailing edge flaps (13) disposed on one or more blades of the stator (S1, S2, S3, S4).

13. A rotor-stator arrangement according to any one of the claims 10 – 12, **characterized in that** one or more blades of the stator (S1, S2, S3, S4) are movable about a predefined axis.

14. A rotor-stator arrangement according to any one of the claims 10 – 13, **characterized in that** on one or more blades of the stator (S1, S2, S3, S4) one or more movable surface elements (14) are provided.

15. A rotor-stator arrangement according to any one of the claims 10 – 14, **characterized in that** on the surface of one or more blades of the stator (S1, S2, S3, S4) one or more openings (15, 16) are provided for taking in and/or blowing out air.

16. A rotor-stator arrangement according to any one of the claims 10 – 15, **characterized in that** on the trailing edge of one or more blades (S) of the stator (S1, S2, S3, S4) one or more openings (17) are provided for continuously blowing out air.

17. A rotor-stator arrangement according to any one of the claims 10 – 14, **characterized in that** mechanically, electrically, piezo-electrically, hydraulically or pneumatically operated actuators are provided for the purpose of influencing the movement of the means (11, 12, 13, 14).

18. A rotor-stator arrangement according to any one of the claims 10 – 17, where if necessary a method according to any one of the claims 1 – 8 is employed.

19. An engine comprising a rotor-stator arrangement according to claim 18.

20. An airplane comprising an engine according to claim 19.